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ABSTRACT

This report was issued following a meeting of a working group convened at the request of the World Health Organization in order to obtain the views of educational and health administrators on the relevance of educational planning to health problems. The purposes of the group were to define the nature and scope of educational planning in relation to health services, to indicate the responsibilities of health administrations and educational systems in the education planning process, to suggest the functions and forms of organization of an educational planning service at national government levels, and to consider how educational institutions and health services might collaborate effectively in educational planning at regional or local levels. (JD)

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Relevance of Educational Planning to Health Problems

- ED159146

Report on a Working Group

Kuopio
2-5 June 1975

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RELEVANCE OF EDUCATIONAL PLANNING TO HEALTH PROBLEMS

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Kuopio
2-5 June 1975

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Note

This report has been prepared by the Regional Office for Europe of the World Health Organization for governments of Member States in the Region and for those who participated in the Working Group on the Relevance of Educational Planning to Health Problems. A limited number of copies are available to persons officially or professionally concerned in this field of study from the WHO Regional Office for Europe, Scherfigsvej 8, 2100 Copenhagen Ø, Denmark.

The views expressed are those of the participants in the Working Group and do not necessarily represent the decisions or the stated policy of the World Health Organization.

The designations employed and the presentation of the material in this report do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Where the designation "country or area" appears in the heading of tables, it covers countries, territories, cities or areas.

This report is also available in French and Russian.

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1. INTRODUCTION

The quality of health services depends very much on the availability of adequate numbers of personnel who have been appropriately trained and who have access to educational services which can meet special and continuing education needs as perceived by both practitioners and administrators of health services. It is not generally the case, however, that educational systems for health personnel take due account of health service needs. Health administrators are aware that educational systems could be more systematically geared to health service needs, while educators know that the potential of education for improving the quality of health services is not being fully realized. For educational systems to develop a responsiveness to the problems of health services while at the same time meeting the individual needs of students, a professional, systematic approach is called for in educational planning.

The Regional Office for Europe of the World Health Organization, with the collaboration of the Government of Finland, convened a Working Group at Kuopio from 2 to 5 June 1975, in order to obtain the views of educational and health administrators on the relevance of educational planning to health problems. The purposes of the Working Group were to define the nature and scope of educational planning in relation to health services, to indicate the responsibilities of health administrations and educational systems in the educational planning process, to suggest the functions and the forms of organization of an educational planning service at national governmental level, and to consider how educational institutions and health services might collaborate effectively in educational planning at regional or local levels.

The Working Group consisted of 14 individuals experienced in various aspects of educational and health administration (see list of participants, Annex II). At the formal opening session they were welcomed by Dr A. Marttila of the Finnish National Board of Health, Mr Risto Höltta, Governor of the Province of Kuopio, and Dr Tapani Vanha-Perttula, President of the University of Kuopio.

The Director of the WHO Regional Office for Europe, Dr Leo A. Kaprio, was represented by Dr J. Gallagher, Regional Officer for Education and Training. In his opening address he referred to the choice of Kuopio as the meeting place of the Working Group. It was particularly appropriate because the new University of Kuopio was committed to prepare health personnel for the Finnish health services and was closely associated with the regional health authorities in determining manpower needs and staffing patterns. The community health services provided the setting for both the training of students and operational research in the health services. It was thus an example at the institutional and regional level of educational planning related to health service needs.

The WHO Regional Office had organized meetings and training programmes on health planning and health manpower planning. It promoted also the training of teachers in curriculum design and teaching methods. There remained the problem of how educational systems for health personnel and health administrations could be associated so as to ensure adequate representation of health administrations in the educational planning process and at the same time a professional approach to educational planning. It was in this context that the meeting of the Working Group was taking place.

Professor Hannu Vuori was elected chairman of the Working Group and Miss Winifred Logan as rapporteur.

2. HEALTH PLANNING AND EDUCATIONAL PLANNING FOR HEALTH PERSONNEL

Health planning has been the topic of a number of meetings and studies organized by the WHO Regional Office for Europe.[1-4] WHO expert committees have considered also training in national health planning[5]

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[1] World Health Organization, Regional Office for Europe (1973) Working Group on Health Planning in National Development, Stockholm, 19-22 June 1972, Report, Copenhagen

[2] World Health Organization, Regional Office for Europe (1974) European Conference on National Health Planning, Bucharest, 12-16 March 1974, Report, Copenhagen

[3] World Health Organization, Regional Office for Europe (1969) Symposium on Methods of Estimating Health Manpower, Budapest, 15-19 October 1968, Report, Copenhagen

[4] World Health Organization, Regional Office for Europe (1974) Working Group on the Application of Epidemiology to the Planning and Evaluation of Health Services, Copenhagen, 19-23 November 1973, Report, Copenhagen

[5] World Health Organization (1970) Training in national health planning; report of a WHO Expert Committee, Geneva (Wld Hlth Org. techn. Rep. Ser., No. 456)

and the development of studies in health manpower.[1] In addition two WHO Public Health Papers deal with aspects of health planning.[2,3]

It is generally accepted that health is a basic human right as well as a very important factor in national development, and that health planning is necessary in order to make the best use of the limited resources that a country can allocate to promoting health and developing health services. In recent years World Health Assemblies have advocated the preparation of national health plans as a major responsibility of health administrations, and health planning is being used to a greater or lesser extent and in a variety of forms in many countries.

The European Conference on National Health Planning distinguished between two types of health planning:

(a) Planning for health, or national health planning: this has been taken to mean planning for the optimal use of all the scarce national resources available for improvement of health (or health status) over a given period, whether those resources lie within the so-called health sector or outside it.

(b) Planning for health services, or planning for the delivery of health care: this implies planning for the most effective means of providing health services or delivering health care over a given period with the predicted limited health resources likely to be available.

The Conference noted that the form which health planning took in different countries - in line with the former (wider) definition or the latter (narrower) one - would depend on the administrative structure and characteristics of each country. Irrespective of the type of health planning, it is obvious that it has important implications for educational planning for health personnel.

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[1] World Health Organization (1971) The development of studies in health manpower; report of a WHO Scientific Group, Geneva (Wld Hlth Org. techn. Rep. Ser., No. 481)

[2] World Health Organization (1971) Principles of health planning in the USSR, Geneva (Public Health Papers, No. 8)

[3] World Health Organization (1974) Administration of environmental health programmes - a systems view, Geneva (Public Health Papers, No. 59)

The following definition of health manpower planning was given by a WHO Scientific Group on the Development of Studies in Health Manpower.[1]

> "Health manpower planning is the process of estimating the quantity and type of knowledge, skills and abilities needed to introduce predetermined alterations in the functioning of a health system so as to make it more probable that the desirable changes in the health of a population will be achieved. Such planning involves specifying who is going to do what, and also where, when, how and for what patients or population group, so that the knowledge and skills necessary for adequate performance can be established and made available according to a predetermined schedule. This must be a continuing, not a sporadic, process.
>
> In general, health manpower planning implies the generation and utilization of skills, and involves:
>
> (1) the analysis and projection of health needs and the population's demands for services;
>
> (2) the measurement of present availability of health manpower and an analysis of its pattern of utilization and effectiveness;
>
> (3) the estimation of future manpower requirements and of education and training needs, in the light of overall health plans;
>
> (4) the detection of imbalances between the estimated requirements and the expected supply; and
>
> (5) the formulation of policy to alleviate these imbalances, including measures to achieve optimum utilization of the available manpower."

In the view of the Scientific Group, "the goal of health manpower planning is to provide the most economical 'mix' (staffing pattern in terms of occupation and category) of the professional and auxiliary health workers needed for the effective, efficient, and safe delivery of the required services of the highest quality compatible with the resources of the population. Every country has to determine and establish its own 'ideal' health manpower pattern".

Educational planning for health service needs depends on health planning and health manpower planning for information on the goals and

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[1] World Health Organization (1971) The development of studies in health manpower; report of a WHO Scientific Group, Geneva (Wld Hlth Org. techn. Rep. Ser., No. 481)

priorities of the health care systems, on the numbers and categories of personnel to be trained and on the functions and tasks for which they have to be trained.

Various relationships with a bearing on this subject are illustrated in figures 1 and 2.

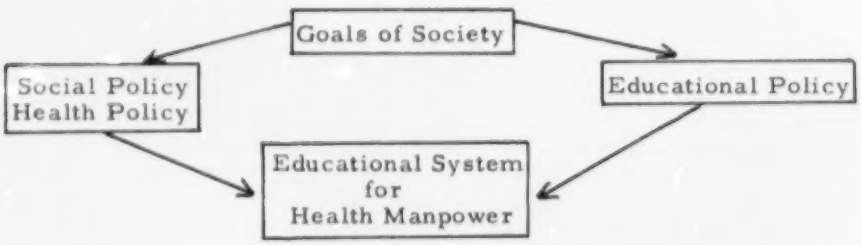
Fig. 1

RELATIONSHIP BETWEEN HEALTH NEEDS AND EDUCATIONAL STRUCTURE

health needs
↓
functions best suited to meet these needs
↓
division of labour best suited to implement these functions
↓
manpower structure best suited for this division of labour
↓
educational structure best suited to produce this manpower

Fig. 2

RELATIONSHIP OF EDUCATIONAL PLANNING TO THE GOALS OF SOCIETY



2.1 Difficulties in coordinating education and health services

Health planning is not yet sufficiently well advanced in most countries to provide all the information needed for the corresponding educational planning. Health manpower planning in particular is not yet applied systematically. Furthermore, the interrelationships between the health service and educational systems are not yet sufficiently close to ensure a good fit between the output of educational systems and the manpower needs of health services.

Educational planning is not a prominent feature of the management of educational programmes for health personnel. Educational policy-making should include careful consideration of professional requirements

and national needs by all responsible for education. It is often not well formulated at present.

Educational planning with regard to health personnel involves two separate areas of interest, each of great importance to the individual and to the nation - education and health care. Other interests are also concerned such as social services, government planning and economic departments, statutory professional bodies, professional associations, and student and consumer pressure groups. Academic priorities and service priorities must be considered as well as professional and consumer interests and, as these are not always compatible, it complicates the educational planning process. The following factors contribute to the difficulties which have arisen:

(a) Lack of coordination between health planning and educational planning. Historically, health planning and educational planning have different origins and the respective policy-making bodies have not usually collaborated effectively in preparing personnel. Universities, colleges and monotechnical schools such as those of nursing, physiotherapy, and radiography, although frequently financed by government funds, have exercised independent policies which are often not compatible with national health manpower policies. The education of health professionals has been slow to respond to new health needs brought about by epidemiological, demographic, environmental and social changes as well as raised public expectations. The continuing use of highly specialized hospitals as the major setting for the basic training of medical and nursing students is a case in point.

(b) Absence of formal administrative machinery conducive to collaboration. The health care service has not always made adequate provision for formal collaboration between health care planners and education planners. However, the rapid expansion of both systems in recent years now requires such links.

A particular problem in this respect in some countries is that health administrations may consider the extra costs incurred by the use of health service facilities for training purposes as an imposition and students as encumbrances on the services. Similarly education administrations may consider it inappropriate to be responsible for the running costs of teaching hospitals.

(c) Mutual isolation of professional groups. The various groups of health personnel have developed separately and educate their recruits in isolation, although many of their activities are interdependent. Little attempt has been made to organize interprofessional training. This isolationist policy has fostered a fragmented approach to client care which is not conducive to teamwork and which indeed blunts the ability of any one professional group to appreciate the contribution of other groups.

(d) Changing roles. The various occupational groups have jealously guarded traditional functions and have been somewhat unwilling to review and redefine their roles despite altered circumstances in the clinical/practical situation. There is sometimes a tendency to create new categories of personnel rather than re-orient existing categories. The resulting role confusion can make it difficult to define appropriate work responsibilities and develop satisfying career opportunities.

(e) Postbasic and in-service education. Postbasic and in-service education have developed haphazardly under the aegis of a variety of bodies, sometimes outside national health and educational systems; they have generally not been coordinated with basic education.

(f) Unstandardized methods of information collection. The statistical information collected by and available to the various health and educational agencies has not been derived by standardized methods and this does not permit optimum utilization of data required for national planning purposes.

(g) Absence of, or inadequate manpower planning. Often there is little appreciation of the value of planning manpower at national level where it would be possible to estimate the numbers of different categories of health care staff required. Most practitioners in the main health care professions come into the service via the recognized educational programmes for the respective groups but recruitment and selection of students have rarely been overviewed at national level. Little consideration has been given to such issues as the effect of an increase in recruitment in one category on a complementary group or of the delayed effects of recruitment for a group with a lengthy educational programme. In short, the elements of the health manpower development process - planning, production and utilization - have not been coordinated.

2.2 The joint responsibility of education and health care systems for educational planning

The need for the joint exercise of responsibility for educational planning by the education and health care systems has been emphasized at several recent meetings convened by the WHO Regional Office for Europe[1-3] and most recently by a Group of Experts convened by the Organisation for Economic Co-operation and Development (OECD) Centre for Educational Research and Innovation.

The Report[4] of the OECD Group referred to the relationship between health care systems and systems for educating the health professions as "a partnership oriented toward the future". "We reject" it said "the notion of an educational enterprise slavishly subservient to current health care practices. Equally, we reject the notion of an educational enterprise pursuing its own aims independently of the needs of society and of health care systems. Instead, we have sought to identify means whereby education and health care can unite in a partnership aimed at a series of mutual changes, as improved health care systems of the future evolve."

The OECD Group concluded that effective cooperation between systems of education and health-care depended on:

" - two urgent needs: clear expression of national health policies, and integration of health care and education of the health professions at a working level;

- two critical factors in satisfying those needs: coordinated government action and substantial investments in innovation and evaluation;

- two important processes that can help timely progress: large-scale re-education and international cooperation."

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[1] ILO/WHO (1974) Conference on the Teaching of Occupational Health and Safety, Milan, 26-30 June 1972, Report, Copenhagen

[2] World Health Organization, Regional Office for Europe (1973) Conference of Deans of Medical Schools, Copenhagen, 30 April - 2 May 1973, Report, Copenhagen

[3] World Health Organization, Regional Office for Europe (1975) Meeting of Deans, Teachers in Medical Schools and Senior Administrators, Copenhagen, 26-29 November 1974, Report, Copenhagen

[4] OECD (1975) Study of Education of the Health Professions in the Context of Health Care Systems, Paris

It continued:

"As important as any prescription for specific changes in the health and educational systems, or the governance and interaction of the systems, is the need to establish mechanisms and processes in the organizations concerned, in such a way as to enhance their capability to respond more rapidly and effectively to the changing needs of the future."

3. DEFINITION AND SCOPE OF EDUCATIONAL PLANNING

Educational planning is described by Coombs[1] as the application of rational systematic analysis to the process of educational development with the aim of making education more effective and efficient in responding to the needs and goals of its students and society.

According to Coombs, a progressive educational planning process should:

(a) be integrated with the plans of broader economic and social development;

(b) be comprehensive and embrace the whole education system to ensure the harmonious evolution of its various parts;

(c) be an integral part of educational management and closely tied to the process of decision-making and operations;

(d) take a long-range view.

Coombs was referring to general education but his comments are equally applicable to the educational process for health personnel. He reminds us that educational planning is a continuous process drawing enlightenment from the past to assist with immediate and intermediate goal-setting, providing a baseline for the forecast of future trends and a framework for assessing possible long-term action.

In the final analysis, educational planning for health personnel must be in alignment with national policies as viewed by the politicians. It is the hand-maiden of educational policy, responsible for proposing alternative

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[1] Coombs, P.H. (1970) What is educational planning? Paris, International Institute of Educational Planning, UNESCO

ways of implementing policy, and for seeing to what extent policy is being implemented. It must therefore be linked with implementation or it becomes a useless activity. It is consequently an integral part of educational administration.

If administration is "the process of achieving intended results through organizations"[1] planning as a tool of administration is concerned with the preparation of decisions and the monitoring of the results of those decisions. In these respects, planning can be helpful to administrations because:

(a) planning personnel can tell people who make decisions "what is going on", since they can analyse systematically recent developments, problems and needs in a particular area of activity; they can view those needs in relation to other relevant features of the economic and social system;

(b) by analysing the real situation, following such policy directives as exist or thinking out new policy, planning personnel can inform decision-makers of the implications for finance and other resource "in-puts" of alternative ways of implementing policy;

(c) planning personnel can help to organize programmes and projects, can evaluate their progress and revise them, if necessary.

3.1 The systems approach to planning

The argument for planning in education, as in the health and other fields of social action, is that it is a way of ensuring that limited resources are most effectively used. Modern planning (whether for health services or education) in the formal sense is distinguished from the traditional bureaucratic approach by its use of the systems process, which analyses and explains interrelated elements of whole systems and leads to an understanding of how the structures and processes of a programme, organization or system are composed and interrelated.

The systems approach implies an open system responding to the internal and external environments whereas the traditional bureaucratic approach is typical of a closed system reacting only to internal stimuli; the systems approach implies the formulation of objectives and includes planning, programming and control mechanisms, whereas the traditional bureaucratic approach relies more on habit and intuition and makes haphazard responses to local crises; the systems approach evaluates the

[1] United Nations Department for Economic and Social Affairs, Public Administration Division (1969) Appraising administrative capability for development, New York

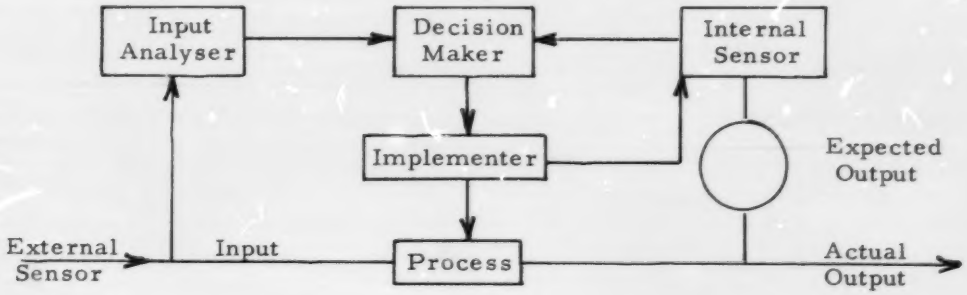
end-product, makes adjustments in relation to objectives and redefines its goals, but the traditional bureaucratic approach has no method of assessing its effectiveness.

The information and insights gained from systems analysis provide the basis for decisions on the methods and techniques to be used to attain the goals of a system, to solve problems and plan future action.

A simple system is depicted in figure 3.

Fig. 3

A SIMPLE SYSTEM



Definitions

External Sensor - representing health and education as well as community interests - scans the environment to identify changes which will influence the equilibrium of the system

Input Analyser - health planners, health manpower planners, educational specialists, professional associations - sorts out information provided by the External Sensor and transmits it to the Decision Maker

Internal Sensor - educational institutional managers, evaluation systems - monitors the internal state of the system and its output and transmits it to the Decision Maker

Decision Maker - educational committee, executives in educational system - produces a decision, policy or instruction and informs the Implementer

Implementer - educational institutional administrators/managers, teachers, students, evaluators - effects changes in the process and appraises the Internal Sensor of the changes

3.2 The functions of educational planners

Planning at government level is nominally in the charge of political heads with whom usually works a body of permanent planning officials. The functions of planners vis-à-vis the politicians are investigatory, consultative and advisory. They propose solutions, with arguments to support them; they serve as scientific counsellors, and they arrange for the continuing evaluation of the decisions which have been made and their outcomes. Their authority is limited to the internal direction of planning units but they may receive delegated power to coordinate the planning efforts of heads of health and education departments.

Educational planning calls for expert advice from many disciplines e.g., education, administration, psychology, social sciences, finance, economics, systems analysis, information sciences and statistics. The views of consumers and pressure groups must also be heard. Consumers include students, who are interested in the quality of education and are themselves important change agents, and the public, who may be concerned about the quality and availability of a health service, e.g., primary care, with important implications for educational policies. Pressure groups with claims to representation in educational planning for health personnel include professional associations of such personnel, labour unions and voluntary health organizations.

The need for expertise at national level does not imply a large body of officials. What is essential is to concentrate on analysis and operational examination and to see that those who already have the responsibility for planning are trained to do it better. For this, their planning functions should be clearly specified so that they do not become involved, as a national planning body, in matters such as curriculum design which are the responsibility of educational management within an institution.

A national body representative of the various health and educational interests and responsible for educational planning for health personnel would have the following duties:

(1) to ensure that the necessary health personnel are trained, their level of competence maintained, and necessary new competencies acquired;

(2) to coordinate the activities of the various bodies engaged in the education of health personnel, while at the same time accepting and indeed promoting regional and institutional initiative; and to ensure that those who use the educational system are represented in the planning process and that their interests and needs are met;

(3) to determine and formulate the general objectives of the educational system for health personnel; and to ensure that the roles and functions of the various categories of health personnel, as specified

by health administrations, are clearly defined and analysed for purposes of formulating institutional and instructional educational objectives;

(4) to establish criteria for monitoring and evaluating educational programmes and the educational system as a whole, as well as individual student achievement, and to see that the monitoring and evaluation are carried out;

(5) to determine, obtain and monitor the required investments and allocations of finance and of human and material resources; and to see that educational administrators and teachers are trained in the necessary planning methods;

(6) to determine in which kinds of institutions and health service facilities, or under which government administrations, the education and training of the various health professions should be carried out;

(7) to promote educational research, to indicate specific educational problems on which research is needed, to commission research, to evaluate research, and to provide for the application of research findings;

(8) to commission special studies which would obtain specific information for decision-making;

(9) to specify the information needed from health administrations and other bodies;

(10) to modify the plans in response to information obtained from the evaluation process and which would take into account consumer reaction and changing demographic, epidemiological and economic circumstances.

The Working Group recognized that much of educational planning is, and is likely to continue to be, carried out by individuals and groups who have had little or no professional training in educational planning. It was possible to identify certain characteristics and competencies of such individuals and groups, which should be represented in the leader and the principal executive members of such a group and for which training could be made available; alternatively consultant advice could be provided in certain respects. Thus, it was considered that a leader of such a group, who should preferably be a teacher and a health professional, should:

(1) be sufficiently educated in the educational sciences to appreciate their scope and potential for meeting the educational needs of health services and of health personnel;

(2) be familiar with the health services of the country and particularly with health manpower needs and projections;

(3) know enough about planning as a tool to be able to make the best use of planning techniques;

(4) be able to bring together teams of varying capabilities according to the type of problem to be solved at any particular time;

(5) be able to apply the principles of group dynamics so as to ensure that members of different disciplines may collaborate effectively;

(6) be able to make appropriate use of consultants, which entails an awareness of the deficiencies of the planning group and the skills which are available elsewhere and can be called upon;

(7) understand the nature and scope of educational programming;

(8) appreciate the potential of methods such as Delphi techniques and model building; and

(9) understand the economics of education.

4. THE PLANNING PROCESS AT NATIONAL LEVEL

In many countries, certain management and planning controls are delegated to intermediate authorities at regional or local level, and to non-governmental bodies such as statutory professional organizations. A general plan and a broad framework for action can be indicated at central level and it is left to the intermediate authorities to develop suitable planning and action in relation to differing local circumstances and to feed back evaluation data to the centre.

As with health planning, educational planning uses a series of sequential steps. Thus, it assesses the existing situation, uses information from the past to make projections, decides on priorities and sets realistic objectives, programmes the plans for achieving these objectives, executes the plans, monitors progress, evaluates the outcomes and reformulates the plans in response to changing circumstances.

An assessment of the existing situation is made on the basis of data such as:

- the types of educational institutions,
- the number of places available for the different categories of personnel,
- the number of staff available,

- staff/student ratios,

- selection methods and admission requirements, and the effects of the secondary education system,

- types of qualifications offered,

- student wastage,

- deployment following graduation,

- the physical facilities available, and

- the financial resources available.

Projections are made of future needs and developments in respect of such factors as:

- educational manpower requirements,

- availability and distribution of educational manpower,

- demographic trends,

- changing patterns of primary, secondary and higher education,

- financial resources, and

- physical resources.

The objectives of the educational system for health personnel are defined:

A key planning responsibility is to determine the priority objectives and functions of the educational system and of each of its subsystems, including each institution and each course.

A distinction should be made between short-term, medium-term and long-term objectives. Financial and other constraints must be taken into account.

The plan is programmed. Different strategies may be indicated for achieving the same objectives. This involves a consideration of different educational approaches and associated financial and other considerations. Recommendations are made on the allocation of resources.

The plan is implemented through the educational programmes provided at the different kinds of educational organizations and institutions. At this regional/institutional level, educational planning is concerned largely with curriculum design and the management of the teaching/learning process. It is the level at which the qualitative needs of health services should be translated into institutional and instructional objectives, and the specific skills required by the health services acquired.

An important function is the monitoring of the plan. At this level the education and health care systems are involved together in the planning process and this provides much of the information needed by central planning authorities to evaluate the plan and modify it. A considerable amount of staff training is usually necessary in order to develop the skills required for effective educational management and the supervision and evaluation of learning.

The plan as well as the planning process is evaluated. Evaluation is essentially a judgement of the value of a plan and of the planning process, based on examination. An evaluation expert must devise methods of examination according to what is to be examined at that time or in that situation. The role of evaluation in this context is the improvement of the planning process and of educational plans as they exist. The purpose of evaluation is to determine to what extent valid objectives have been or are being attained. In this context it serves the purpose of demonstrating to the political authority the usefulness of educational planning. If planning cannot be shown to serve a useful purpose governments cannot be expected to initiate or support the process.

The evaluation should be comprehensive in the sense that it takes account of the inputs, process, outputs and outcomes of planning. Each objective of the plan should be evaluated on the basis of such factors as its validity, e.g., in relation to the policy of the educational system vis-à-vis the health services as reflected in the health plan, the appropriateness of the criteria for selecting objectives, the appropriateness and consistency of the methods employed to achieve the objective, and the factors which have led to its achievement or nonachievement.

Evaluation should indicate to what extent the plan is or was realistic in respect of its quantitative and qualitative objectives, of the resources provided to implement it, and of the capacity of the educational system to react to evaluation findings.

The evaluation of the outputs and outcomes of planning is a major requirement. Quantitative goals are readily evaluated. Qualitative assessment is difficult if it entails a judgement of the extent to which those who have been trained can perform the functions for which they have been trained or whether those functions are best calculated to meet most efficiently the health needs of communities. This is an important goal of external evaluation, external in the sense that it is performed by a group

other than those who teach or who provide the resources used in the educational process. Similarly, it should indicate to what extent the organizational structure and the administration of the health services is such that the health professional can apply the requisite skills acquired during training.

At the level of regional health services and educational institutions the evaluation process should identify and judge the worth of unplanned outcomes such as, e.g., the effects of educational programmes on regional health and social services, and to what extent the needs of both groups of services and of the educational system are being reconciled and met.

On the basis of the evaluation the plan is modified and reformulated as necessary.

5. ORGANIZATION OF EDUCATIONAL PLANNING FOR HEALTH PERSONNEL

5.1 Mechanisms for planning at national level

While planners at government level can have a powerful influence on policy decisions, planning may or may not have a real bearing on what is done in practice. Some countries have a strong basis for planning but in others political decisions may be taken without consultation with planning services or careful consideration of their effects.

Planning makes it possible to formulate proposals as a basis for decision-makers. But a national plan of education for health personnel must be considered along with a host of other matters of public import such as national defence, communications or agricultural development. This interplay of competing interests will determine how far the plan is implemented and in some countries educational planning for health professionals may not be given high priority.

The organizational mechanisms needed to decide how planning can give effect to policy should bring together the education, health and other interests which have a role in educational planning at national and regional/institutional levels along with experts in education and in planning. Educational interests include governmental educational administrations, universities and university equivalent schools sometimes administered by health administrations, vocational training bodies, statutory and voluntary professional associations, and a variety of health service facilities, foundations and private organizations. In some countries secondary education has a role in preparing health personnel. Health interests include

at government level not only health ministries but also other ministries with responsibility for special health services such as environmental health and occupational health. There should be close liaison with the ministry responsible for planning and with those responsible for manpower projections in ministries of economic development and labour. The fiscal constraints of a budget call for collaboration with financial planners.

The necessary joint consultation between planners in the ministries concerned may be provided for by some form of "planning council" in which representatives of the implementers of plans would be found also and which would have the functions specified above (see page 12). Certain inputs would be required by such a planning council.

(a) A statement of the objectives of the health care system

Assuming that educational planning for health personnel is preceded by health planning and health manpower planning at central level, there should be a clear statement of the objectives of the health care system so that the educators know what they are preparing students for, and can in turn define clear and coherent educational goals. Otherwise the activities of the educational system and health care system are liable to be uncoordinated or even divergent.

(b) A mechanism to channel information

Up-to-date information about the existing situation is needed. This is usually collected at regional and local levels, and it is necessary to ensure standardized methods of collection and presentation.

An information service should incorporate a wide range of activities involving the collection, processing and interpretation of information, data capture, data processing, record keeping, presentation and dissemination of statistics. A central collecting point is needed to handle the information, to avoid unnecessary duplication, to regularise methods of collection and to facilitate information retrieval when data are needed for planning and decision-making.

(c) A mechanism to channel research findings

Hard data of the type collected by an information service is not the only kind of information required by education/health planners; it may be necessary to initiate projects which seek answers to specific questions before certain plans can be justified. A central body should organize research and studies associated with the health service, decide how much it is reasonable to spend for this purpose, collect information about relevant research, prevent unintentional replication of studies and make information available when required for educational planning.

(d) A mechanism to channel public opinion

A consultative advisory group representing the views of professional organizations, pressure groups and consumers could make recommendations to the planning council to investigate specific problems.

Similar mechanisms might be repeated at regional or local level depending on the size and administrative structure of the country.

The Working Group appreciated that the composition and status of a national "planning council" would vary among different countries, as well as its relationship to the ministries and other organizations concerned with education and health. It could not be taken for granted that such a body would be in a position to undertake all the functions which the Group had outlined (see page 12) or that individuals qualified according to the criteria which had been specified (see page 13) would be available soon in all countries.

From the organizational point of view the countries in which the ministries of health were responsible for the education of all health personnel appeared to be in a better position than others. In most countries of the European Region responsibility was divided among several ministries and the position was further complicated by the greater or lesser degree of autonomy which universities enjoyed in respect of medical education.

It was not certain that government ministries would always work with ad hoc bodies representing more than one ministry, or that they would delegate planning responsibilities to interministerial bodies with nongovernmental representation.

The role of universities in educational planning needed to be clarified. Autonomous universities were unlikely to accept a secondary role to governmental or independent planning bodies when they had a statutory responsibility to allocate means according to their own criteria. In such cases some mechanism had to be developed which would reconcile the rights of universities with national discipline-based planning.

Such organizational challenges were being met in different ways in different countries. It was clear that comprehensive educational planning as a tool of health and educational administration could not be readily attained. Nevertheless, both health and educational administrations could make significant improvements in relating educational programmes to the needs of health services without waiting for the establishment of a comprehensive national service.

5.2 Examples of national planning organization

Examples of more or less developed organizational arrangements were cited from a number of countries. In Algeria, educational planning for public health personnel has become the responsibility of the National

Institute of Public Health which was already responsible for health planning and the training of all public health staff. The interests represented in the Institute are: the basic health services; the Ministry of Health; primary, secondary and higher education; paramedical education; and the consumers of health services. The Institute's staff have both administrative and educational responsibilities. The allocation of educational planning functions to an existing national institution was made in order to ensure that educational planning did not become an isolated activity.

Sweden[1] provided an example of a country in which the integration of educational and health manpower planning was well advanced.

The recent reorganization of the National Health Service in the United Kingdom had provided organizational mechanisms particularly at the regional level for the interaction of the health and educational systems.

In Czechoslovakia medical education was represented in an educational planning unit for higher education in the Ministry of Education but medical educators did not consider this as adequate representation. However, there was also an interministerial commission within the Ministry of Education with representatives of the Ministries of Education and Health, of medical schools and professional associations, which functioned in an advisory capacity to both Ministries and was in a good position to advise on policy. The same country provided an example of regional administration since in each of the ten regions of the country a regional health institute was concerned with all aspects of health services including the education of health personnel.

In the USSR educational planning for health personnel was a matter for the Ministry of Health. A planning unit in that Ministry dealt with medical education although the planning of higher education in general was the responsibility of the Ministry of Higher Education.

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[1] Rexed, B. (1974) The role of medical education in planning: The development of a national health care system, J. med. Educ., 49, January

6. EDUCATIONAL PLANNING AT INSTITUTIONAL[1] LEVEL

Educational planning, like health planning, cannot be an exclusively national undertaking. At the level of central government it provides a framework for countrywide implementation, which is then presented to lower levels of management as policies to be followed, constraints to be observed or plans to be implemented. But regional/institutional situations vary and inevitably present different problems which offer different possibilities for solution. The central plan should be capable of being adapted to regional and institutional circumstances and modified according to experience in implementing it. Similarly, planning at the regional/institutional level raises many questions that can be answered only at national level.

A similar systematic approach to planning is used at the regional/institutional level as at the national level. While it is desirable to have a formally designated educational planning unit attached to an educational institution, all those with educational responsibilities should be able to play specific parts in the planning process. The institution is concerned mainly with the implementation, monitoring and evaluation of the overall plan which has been prepared at national level with the appropriate input from the regional health and social services and the educational institution. It is at this level that the needs of health services must be translated into educational objectives which result in professional skills.

6.1 Steps in the educational planning process at institutional level

The institution is responsible for designing the sequence of learning experiences which will produce the skilled health worker. The systematic approach to curriculum design implies the careful specification of requirements and objectives, the systematic analysis of these objectives in order to specify alternative approaches to achieving them, the development of a system to meet the objectives, and the evaluation of its performance. It is the educator's responsibility to design, develop and evaluate "learning systems" that will bring out the best student performance against specified criteria at a minimum cost in time, effort and money.

At the regional/institutional level, even more than at the national level, flexibility is essential. The skilled programme planner is not bound rigidly to a fixed sequence of steps that will produce a solution which is both the only one and the best.

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[1] In this context the term institution means not only educational establishments but also statutory and voluntary professional organizations to which educational functions are delegated. Thus, in the United Kingdom, the Royal Colleges of Physicians, of General Practitioners, of Nursing etc. may be taken as examples of institutions.

He is rather a strategist who uses a set of principles, procedures and techniques from which he selects those that suit a given situation. He understands the interactions of the components of a system and is concerned with questions of cost and effectiveness and with identifying the resources required for successful learning.

The techniques which the programme planner or learning-system designer uses to translate health service needs into the objectives of educational programmes include the development of complete and accurate descriptions of the tasks which the health worker must perform, and the analysis of those tasks, followed by the formulation of operational learning objectives. The analysis of tasks and objectives is a particularly important technique in educational programme planning because it enables the planner to identify task-related concepts, principles and skills which students must master in order to perform the task, to specify the content and sequence of course units, and to identify the types of learning which these entail.

While the task description tells how a task is performed, the task analysis indicates how it is to be taught, to whom, when and where. It assists also in identifying the entry skills of learners, the conditions under which the task has to be performed or the learning demonstrated, and the characteristics of the learners.

Finally, the task analysis tries to identify the special conditions or constraints associated with the performance of a task. The programme planner must ensure that as far as possible what is learned in the learning setting can be transferred to the practice situation where there are usually special conditions and constraints which do not apply in the learning environment. This has extremely important implications for the use of realistic learning settings whether in actual or simulated situations.

6.2 Constraints on institutional level planning

The scarcity of skilled educational planners is a serious constraint on the process of relating education and training to health service needs. It calls for a major effort in training teachers in planning skills and in managing the teaching/learning process. It must be seen as a responsibility of a national educational planning body to establish the necessary training programmes (item 5, page 13) and to see that technological and consultant services are available to institutions.

There are other constraints mainly related to the traditional and often legally regulated administrative policies, structures and practices of educational systems and institutions. Also, as has been noted earlier (page 5), the techniques of health planning and health manpower planning are rarely applied systematically in such a way as to make available to educational planners the detailed information and projections on the basis of which they can construct highly service related programmes.

6.3 Educational planning in the absence of definitive health planning

Despite the many constraints on the capacity of educational institutions to meet health manpower needs in a highly organized and systematic way, it would be obviously futile to await the organization of a formal comprehensive health planning/educational planning system before the educational system for health personnel attempts to relate its programmes more closely to the needs of its consumers. The fact that in many countries universities exercise a high degree of autonomy need not and does not constitute a serious barrier to collaboration with health administrations. On the contrary, the relative freedom which universities enjoy permits flexible and varied approaches to the solution of the problem. What seems to be needed is a more professional approach on the part of educational institutions to the use of educational strategies to attain specified educational goals.

The problem-solving independent-learning approach to professional education is based on the premise that students can be trained to solve classes of problems irrespective of the kinds of situation in which they will find themselves in their professional careers, and to continue to learn independently so as to remain continually aware of new problems and of new techniques for their solution. This approach is being used in the Netherlands at the University of Limburg at Maastricht.

6.3.1 An example from the Netherlands

The planning of the educational programme of the Maastricht Medical Faculty illustrates an approach to educational planning for health service needs which does not depend on the kind of qualitative definition of the educational endproduct which would be expected from a national health authority as an outcome of a health planning process, and which is not yet available in most countries. Rather, it uses educational strategies which are designed to produce a graduate sufficiently skilled in problem solving and in independent learning to be able to respond and adapt to evolving health care services and even to play a part in their further development. A problem-oriented curriculum based on self-study focuses on the development by the students of the skills required in primary health care, and this is reinforced by their active participation in research into the delivery of health care.

The form of relationship between the medical school and the health services is an interaction in jointly developing policy and ways of implementing it - a joint regional and institutional effort to implement national health and education policies at the regional level.

With regard to national health policy there is a growing consensus in the Netherlands that:

(1) health needs are best served by the development and expansion of primary health care; and

(2) it is difficult to direct and administer health care delivery at the national level other than in a very global way. Authority and responsibility for health care systems can profitably be delegated to the regional level, a region being an area with a population of between 500 000 to 1 000 000 people.

The new medical faculty has derived its institutional goals from this policy, and its commitment to the development of primary health care and to active participation in the regional health care administration is expressed in its organization and curriculum, as well as in its staff recruitment and development practices. Two further areas of activity which are planned to complement the undergraduate education component and which in turn are complementary to each other are:

(a) systematic continuing education based on the demands of medical practice; and

(b) the provision by the faculty of methodology and manpower for research in the delivery of health care.

The research policy of the Maastricht Faculty is considered to be a crucial factor in the implementation of the educational policy. It is considered that education which is multidisciplinary and not departmentally based needs also multidisciplinary research. With the need to establish research priorities because of limited resources and the commitment of the faculty to education for primary health care, research planning complements educational planning, restricts the number of topics for research and directs research not at the development of a discipline but at epidemiology and the study of the health care system. This requires an acceptance by faculty members of those restrictions and of the priorities of the medical school. The close relating of research to education in a small medical school may well result in a lower unit cost for medical education than would be the case in a large school where much of faculty time is given to discipline-based research unrelated to the educational programme.

When such a new educational programme is launched, rigorous external evaluation is called for so that the health administration has evidence about the quality of the product, and other educational institutions have a basis for decisions on introducing changes. The Maastricht School had introduced two measures designed to produce objective data on its experience and to safeguard its students. One was the establishment of an external evaluation committee, and the other, formal continuing collaboration with the educational development departments of the other medical schools in the Netherlands.

6.3.2 Implications of the Maastricht experience

The Working Group considered a number of issues raised by the Maastricht experience in relation to educational planning. One was the advantage that a new school appears to have over an established school

in establishing new kinds of relationships with health services and in introducing educational reform. It was felt, however, that in respect of relationships between educational institutions and health services, it was always possible even for established schools to experiment and to learn from the experiences of others. Comparisons between countries with regionalized health services and rigid educational systems and others with "functioning nonsystems" of health care but opportunities for educational experimentation might indicate the patterns of relationships which suit one category better than the other.

An opportunity which arises from a close relationship between the health and educational systems at the local/institutional level is for the national authority to use the health service educational setting for research and special studies in order to obtain information needed for national policy-making and planning and to clarify issues and problems which complicate national planning. Thus, a university could cooperate with a health administration to set up and evaluate a new approach to providing a health service programme, e.g., by testing different manpower structures and modifying educational programmes accordingly.

Assumptions on which both health and educational programmes are based may be tested and issues of cost/effectiveness and cost/benefit clarified. References were made to the difficulty of developing "functional" budgets and of showing a relationship between money spent at the national level and an effect on the health status of the population, because of the many other factors which intervene. These other factors can be partly controlled in experiments at the local level and it could be a matter of national policy to test assumptions and base decision-making in both health and educational systems on such research. Although the time perspective of the experimental approach is somewhat longer than that for decision-making, it is important to recognize that decisions are often based on assumptions which can be tested over time.

With regard to experimentation in education a strict methodology was essential. "Experiments" sometimes become established practice without having been evaluated, so that they made no contribution to planning and decision-making. There was sometimes an uncritical attitude to innovation and an inability to distinguish worthwhile innovation from an educational fad. Often, change was introduced but not consolidated so that its evaluation became impossible. On the other hand, valid experimental data were often overlooked or ignored by planners or were taken into consideration after unduly long delays.

There were two particular areas of applied science in relation to health services and education of health personnel which universities needed to develop. One was the input of behavioural sciences to the analysis of health services and the development of sound health policy. The other was the contribution of the educational sciences to the planning, implementation and evaluation of educational programmes. Both were still quite underdeveloped in respect of their potential to health care compared to the

contribution of the biological and physical sciences. The association of universities with health and health-related services would provide the necessary setting for research and the growth of empirical knowledge in both fields.

6.3.3 Other examples

Two other examples (besides the Maastricht experience) of dynamic interaction between educational institutions and community health services were described to the Working Group. One was that of the new medical school at Kuopio, Finland, where the Department of Community Medicine was closely connected with community health services covering an extensive area. The other was an example of a long-established school, the University of Manchester Faculty of Medicine, where clinical teaching had been decentralized so that all the hospitals of the region were being used. One effect had been that students later elect to take postgraduate training in the hospitals in which they received their basic experience, so that an educational resource became also a health care resource. Besides, the Department of General Practice had access to 125 teaching practices which constituted a teaching and research population of 750 000 people. This was producing a marked trend in the educational process towards practical service-related curricular experience and, simultaneously, was raising the standards of health care services.

The Manchester experience and other similar experiences in the United Kingdom had highlighted the need for a more professional approach to the planning and other components of educational administration and management. The university teacher in the role of manager of such educational programmes needs skills which are quite different from those needed for classroom and clinical instruction, while at the same time the educational capacities of those entrusted with the training of students away from the immediate university setting must be developed. The special experience of the Department of Nursing Studies of the University of Edinburgh in respect of training in educational management was cited. The nursing profession in general was much more advanced in this respect than the other health professions.

7. CONCLUSIONS AND RECOMMENDATIONS

There was no reason to doubt that the legitimate needs of health services for an orderly and focused educational approach to training and developing their manpower could be met under the various political systems represented in the European Region, under existing administrative patterns and without eroding significantly the autonomy of universities. In-depth studies in certain countries by WHO with assistance from

UNESCO and the International Institute of Educational Planning (IIEP) could be helpful in indicating how the problem was being dealt with in different political and administrative systems, as well as the nature of the major obstacles to meeting the educational needs of health services. New educational institutions and new forms of health service organization could be particularly fruitful subjects of study in these respects. Countries in which health planning and country health programming had been instituted offered special opportunities. International educational associations such as the Association for Medical Education in the European Region (AMEE) and the Association of Schools of Public Health in the European Region (ASPHER) could be involved in the studies.

Educational planning could be promoted by means of multidisciplinary seminars and, for specific training purposes, workshops for those engaged in planning from groups of neighbouring countries and for national groups. These would be particularly useful if linked with national health planning.

The attempt should be made to associate educational planning with country health programming, and the recent experience of Algeria with WHO in this respect suggested the possibility of such an exercise in Algeria.

Project system analysis was another new technique which WHO had developed and had applied in Scotland in respect of maternal and child health services; the possibility of relating educational planning to this technique might also be considered.

The present Working Group might be followed up by one or more national case-studies in which a national planning group would work with an international group and make their experience and problems available for analysis.

Planning could hardly be studied separately from the administrative practices of which it was a part, nor at institutional level from the institutional management context in which institutional level planning took place. Case-studies of institutional management might be undertaken especially as joint projects of the AMEE and the WHO Regional Office, and could simulate the interest of governments in educational planning. Areas of special importance in educational management could be identified and considered by the Working Group on the Management of Educational Institutions which the Regional Office is to convene in 1976.

Training in educational management, to include educational planning, needed to be developed. In view of the lack of experience in this regard of medical teaching institutions compared to nursing schools and of the considerable budgetary resources allocated to medical education it seemed important to pay special attention to medical education. At the same time it would be advisable to develop joint training programmes in educational planning for health and educational planners in order to promote the kind of integration needed for a rational approach to educational planning for

health service needs. However, the Working Group stressed the prior need for countries to formulate national health manpower policies and to develop the health manpower component of health planning.

PROGRAMME

Monday, 2 June 1975	
9.30 - 10.30	Opening session
11.00 - 12.30	The scope and elements of educational planning - introduced by Mr R. Lyons
13.30 - 16.00	Educational planning for health service problems: the key planning questions - introduced by Professor H. Tiddens
Tuesday, 3 June	
9.00 - 10.30	The functions of educational planning at national level (macroplanning) - introduced by Dr A. Benadouda
11.00 - 12.30	The functions of educational planning at institutional level (microplanning) - introduced by Professor P. Byrne
13.30 - 15.00	The role of health administrations in educational planning - introduced by Professor J.F. Isakov
Wednesday, 4 June	
9.00 - 10.30	Planning as a function of educational administration and management - introduced by Mr R. Lyons
11.00 - 12.30	Training educational planners? - introduced by Professor B. Pissarro
Thursday, 5 June	
9.00 - 12.30	Organization of an educational planning service for health manpower - introduced by Dr J. Vysohlid
12.30 - 15.00	Review of discussions of Working Group; conclusions and recommendations
16.00	Closing session

ANNEX II

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[1] Participation expenses not paid by WHO

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